PcVue LET'S ENGINEER

PcVue
REMOTE SOLUTIONS

www.pcvue.com

EFFICIENT OPERATION AND MAINTENANCE OF REMOTE ASSET

NEED FOR NEW WAY OF OPERATE AND MAINTAIN ASSETS

The massive adoption of smart mobile devices in the professional world and within this increasingly connected sphere of the Internet of Things (IoT) or the Industrial Internet of Things (IIoT) raises new opportunities and also new challenges.
The multiplicity of sensors and the massive amount of raw data generated by the systems poses the problem of their presentation to humans - who are more and more mobile - in order to help them in their decision-making.
Data have to be filtered to bring relevant information on smart mobile devices with their limited size screens.
Historical approaches to monitor, diagnose, maintain and control industrial and building assets must be reconsidered.

FACTS & OPPORTUNITIES

- Networks and IoT increase the number of connected “Things”
- …and generate a massive amount of raw data
- Users are more and more mobile
- Need for solutions that filter raw data and deliver relevant information in a way that is adapted to small mobile devices
- Operations can be dramatically improved

SOLUTIONS FOR ANY REMOTE OR MOBILE OPERATION

There’s many ways to operate and maintain installations remotely depending on the context: The user may need to remotely access the supervision system to monitor and control operations, to be notified in case of important event and be able to react quickly or get information and control of a nearby equipment as he moves…
The needs are multiple and the answer can’t be unique. That’s why PcVue designed a suite of products providing the user with a virtual extension to help taking the right decision whatever the context.
Used independently or combined this suite of products gives remote & mobile solutions that are intuitive, interactive, intelligent and interoperable with no compromise on security.

SOLUTIONS AS A NATURAL EXTENSION OF THE REMOTE/MOBILE USER

User virtual assistance for remote operation and maintenance of your assets

Natural extension of the mobile user
The user is given relevant information with no need to request it

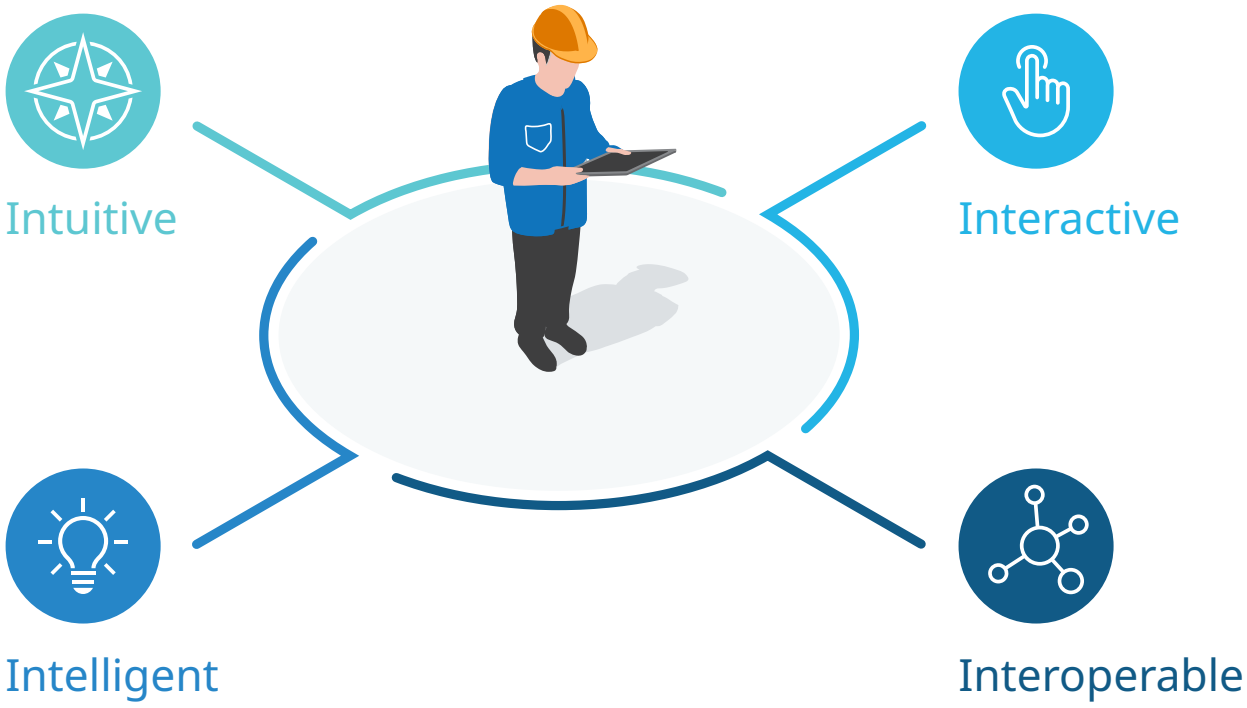
Easy to use/user friendly
The mobile user relies on the system as a natural extension

From data to information
Provides relevant information according to user's location and role

User assist and decision support features & services
Event notifications and processing

Mutual interaction between the user and the system
The user has questions, the system provides answers to take the right decision
The system assists discretely yet efficiently the user that keeps the control

Adapted for various systems
Easy collect data from any source



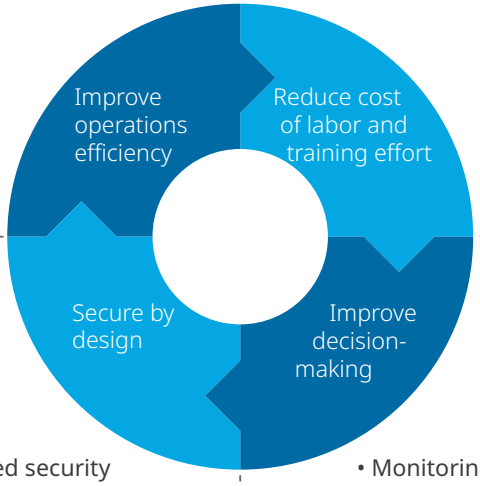
PcVue Remote Solutions - How to provide relevant information to mobile and remote users in an intuitive, interactive and secure manner in any context

BENEFITS

Many benefits are realized with the deployment of a Mobility Infrastructure. These include benefits to all users depending on their roles and to the entire organization in safety, security, comfort and efficiency.

- Increase comfort and services for assisting remote users
- Create an interactive environment as an extension of the human action
- Allow better responsiveness and decision making of operational teams

- User-friendly solution allowing quick adoption by any kind of team
- Ready-to-use solution yet customizable to fit various needs

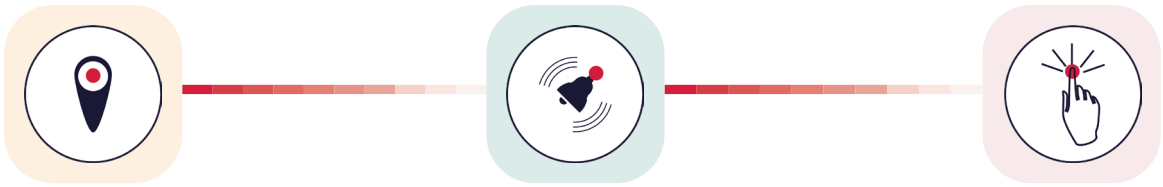


- Built-in support for required security features
- Ready for secure, scalable architectures and communication

- Monitoring & control of industrial process
- Commissioning
- Diagnostic & maintenance
- Team dispatch and security

PcVue REMOTE SUITE

A suite of products to remotely monitor & control your assets



SnapVue
Digital remote assistant

GEOLOCATION
for immediate action
Monitoring & control nearby installations according to location and user's role

TouchVue
Notification app

NOTIFICATION
On-duty app providing information & notifications for immediate action

WebVue
Web client

NAVIGATION
Full graphic interface for remote monitoring & control from a web browser or a remote desktop

TECNOLOGY

Our mobile solutions are based on the EasyMobileTechnology which ensures a fast, easy and secure configuration & deployment

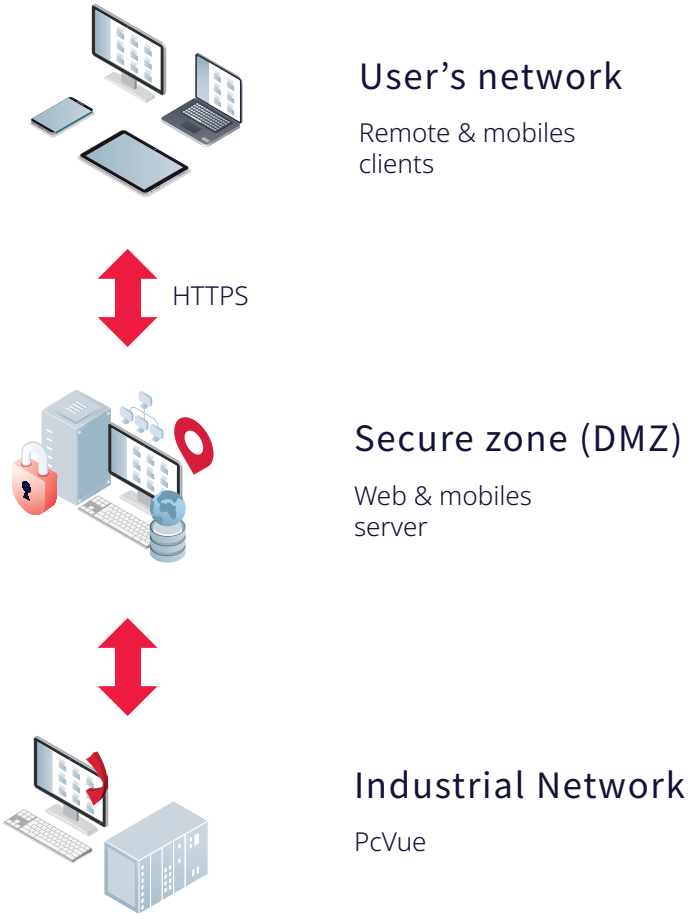
EasyMobile Technology
PcVue

- No gateway, no extra plugin
- HTML5
- No client installation
- A deployment console for easy configuration – no scripts – Wizard only
- Open to third-party application
- Adapted to any user: End-user, SI, IT
- Secure scalable architectures and communications (HTTPS,SSO,OAuth)
- Easy Diagnostic
- Affordable

SECURITY

Secure by design

- Secure architectures and communications using DMZ,HTTPS
- Support for Microsoft Windows Active Directory
- Support for security certificates



NAVIGATION

Remotely monitor & control your assets

Full graphic interfaces for remote monitoring & control from a web browser or a remote desktop.

WebVue

HTML5 web client

- Monitor & control your PcVue process from a web browser with any devices
- No specific development
- Mimics, alarm lists & acknowledgment, event logs, real time and historical trends
- Webservices toolkit available to create your own custom web interface

PcVue REMOTE DESKTOP ACCESS

HTML5 thin client

- Monitor & control your PcVue process from a remote PcVue client with any device
- No specific development
- Client instances are executed in a single central server
- Same features as a client station with no need for installation
- Uses the Microsoft Remote Desktop features
- Secure: no data are transmitted, only keystrokes and mouse moves

NOTIFICATION

Be notified to react quickly

On duty app providing notifications information for immediate action.

TouchVue

Notification-based Mobile app

- Ready-to-use on-call mobile app for PcVue
- No extra development
- Access the data from several sites
- Real-time information and notifications (alarms, values, trends) for immediate action (acknoledgments or control values)
- Archived data (events logs, historical trends)
- Contextual mimic display
- Data filter depending on user profiles
- Watchlist for favorite variables to watch

DIGITAL REMOTE ASSISTANT

Operate as you move

Intuitive information & control of nearby equipment and facility resources.

SnapVue

Digital remote assistant

Intuitive · Interactive · Intelligent · Interoperable · Secure

ASSISTS THE FRONT-LINE WORKERS WHILE IN MOTION

- Smart guidance and notifications of any events
- Intuitive monitoring & control of nearby assets
- Allows support from team or control center experts
- Gives paperless access to any resources and reports tasks instantly
- Access to enterprise information system (Outlook, Teams…)

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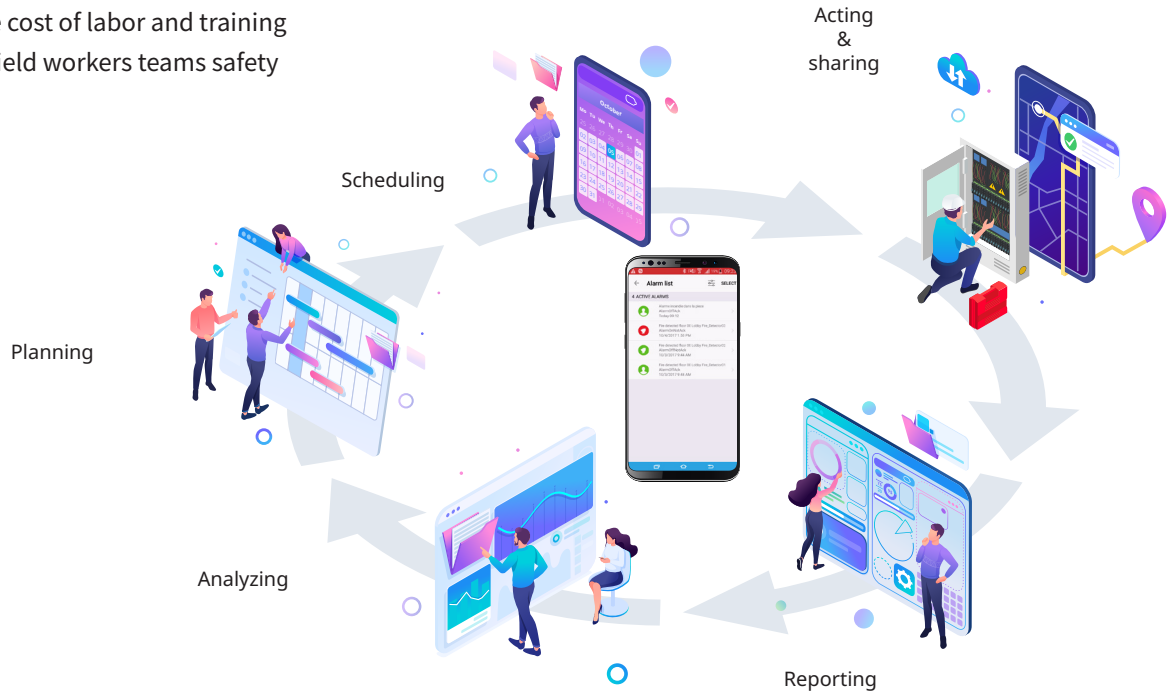
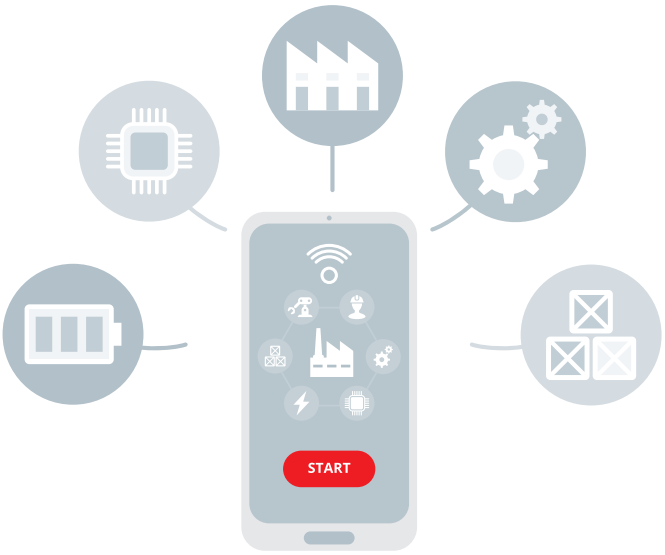
EMPOWERS OPERATIONAL TEAMS

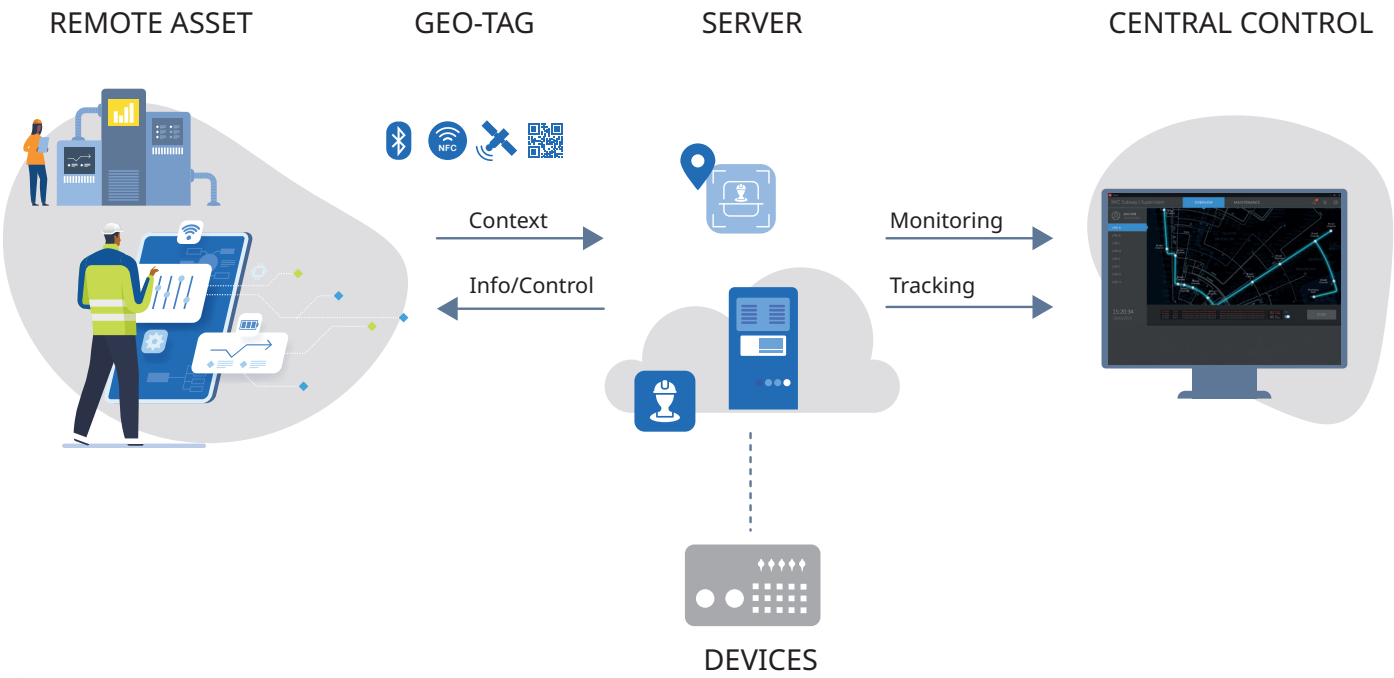
- Improve efficiency of operational teams
- Reduce the cost of labor and training
- Reinforce field workers teams safety



THE PcVue REMOTE INFRASTRUCTURE

The PcVue remote infrastructure consists of geo-tags deployed in zones of control, SnapVue application on the mobile devices and a Server responsible for evaluating the appropriate contextual requirements.
The Server can be stand alone or connected to a central control system which handles the communications needed to monitor and control equipment and other assets.
The mobile devices are communicating with the Mobility Server using standard wireless network connections.





HOW IT WORKS STEP-BY-STEP

1. A mobile worker starts the mobile app and logs on. The worker enters a zone and the app detects nearby Bluetooth LE Beacon tags and WiFi Access Points, or scans a NFC tag, or a QR Code. The app sends the Server the environmental context and the mobile worker's credentials.

2. The Server maintains a database which associates locations and user roles with actions and events. Using the information transmitted by the app, the Server is able to determine the mobile device current location and the role of the user.

3. The Server automatically sends the mobile device relevant information based on the mobile worker's location and role.
The Server provides the SCADA or BMS system with:
   - all real time data needed for the supervisory control.
   - real-time location of the devices and assets as they move.

The server can play automatic sequences depending on contextual events. For example in case of an important event in a zone, an alarm will be automatically broadcasted to any mobile worker in the zone.The Server also maintains status/counters for each zone and send actions to the Scada Server when these status change. For example when the last person leaves a zone, light is turned off.

USE CASES

Different uses, endless possibilities

MAINTENANCE OPERATIONS

SCENARIO

- A Maintenance staff is performing maintenance task on an equipment
- They are facing a machine or equipment that has no HMI or operator Interface
- They scan the QR code or touch the NFC tag to visualize status and parameters
- They then set the equipment to maintenance mode masking alarms, then enter their maintenance actions & reports
- They can consult Manuals or Equipment datasheets as needed.

BENEFITS

- Provides a mobile interface to verify status live of connected equipment
- Improvessafety as maintenance staff has full live information and data sheet/manual available
- Can tune parameters according to overall system and visual reality on the spot
- Intervention summary done on the spot and immediately recorded on central system
- Automatically provides the correct information depending on where the maintenance staff is
- All Industries, Infrastructures and BMS applications

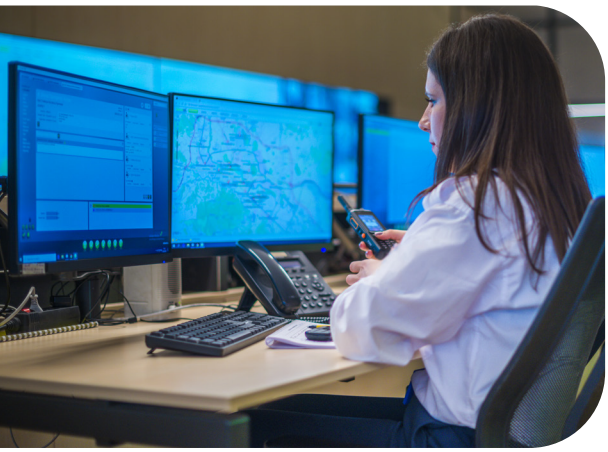
ASSETS TRACKING

SCENARIO

- A critical asset has on-board sensors connected via WiFi,GPRS, GPS, ANT+, BTLE, RFID, LORA
- The location of the asset is sent back to the mobility server
- Location of asset is monitored from server and tracked on a map updated real time
- He scans the QR code or touch the NFC tag to visualize status and eventually control some parameters if something needs to be done

BENEFITS

- Monitor mobile asset movement indoor/outdoor
- Verify asset movements
- Maximize asset utilization
- Alarm triggering or Geo-Fencing on restricted area
- Archive location history



SAFETY AND DISPATCHING

SCENARIO

- Security guard securing a facility is patrolling an area at regular intervals
- Guards have mobile devices running the app
- Their movements during rounds are detected by sensors or GPS location, tapping NFC on must check spots

BENEFITS

- Optimize dispatch of personnel
- Dispatch assistance providing current location, qualifications
- Trigger Alarm with personnel location in case of danger/ emergency
- Monitor and archive movements

ROOM DISPLAY AND CONTROL

SCENARIO

- Registered user with mobile device is moving around a building or facility entering different rooms or zones
- Bluetooth LE Beacons are strategically located in the facilities to propose to the user interacting with his surroundings as he moves
- Particular equipment can be equipped with NFC tags or QR code for the user to access specific controls or parameters

BENEFITS

- Provide an immediate graphical interface for the nearby devices asset
- Eliminates navigation through non relevant mimics
- Secured action according to user rights
- Reduce GUI hardware cost around the facility
- All Industries, Infrastructures, BMS and Home automation applications

DATA RECORDING FOR NON-CONNECTED DEVICES

SCENARIO

- A SCADA application monitors numbers of connected equipment but some older generation equipment such as meters can’t be connected to the system
- An operator with a mobile device scans a NFC or QR code with the device
- They then manually input the reading using his mobile device

BENEFITS

- Enable management of non-connected devices
- Eliminates double entry as data recorded directly from the field device
- Paperless process
- Logs automatically the operator who did the input

ACCESS CONTROL

SCENARIO

- A person is granted access with GEO- tag
- They place their smartphone close to the GEO- tag. Their profile is compared with mobility server user profile list
- Access is granted or denied according to their credentials
- Mobility server logs all entries and eventually exits

BENEFITS

- Integrate Access Control into the BMS system easily. Reduce the number of sub-systems
- Cost effective time attendance software solution
- Possibility to easily segregate different zones with different access level credentials
- Facility Management System, BMS, Hotels applications mostly

COMMISSIONING

SCENARIO

- The Project is in commissioning stage and the automation engineer is testing the SCADA system
- Engineer enters an Bluetooth LE Beacon area or touches a NFC or scans a QR code
- Engineer immediately accesses the SCADA mimic related to their location can test system alone by forcing locally parameters on device and check reading on physical equipment and SCADA reading
- at the same time

BENEFITS

- Speed up commissioning tasks
- An engineer is able to perform commissioning task autonomously.
- Commission both devices and SCADA system at the same time
- All Industries, Infrastructures and BMS applications where automation system is being installed

VISUALIZATION & CONTROL OF NEARBY ASSETS

SCENARIO

- Operators are moving within a Plant or an industrial facility
- They are facing a machine or equipment that has no HMI or operator Interface
- They scan the QR code or the NFC to visualize status and eventually control parameters if needed

BENEFITS

- Provide an immediate graphical interface for the asset
- Avoid navigation through large SCADA graphics
- Reduce installation cost, avoiding the use of single purpose HMIs
- Secured action according to user rights. No unauthorized tampering
- Allows control when outside of the control room
- All Industries, Infrastructures and BMS applications

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